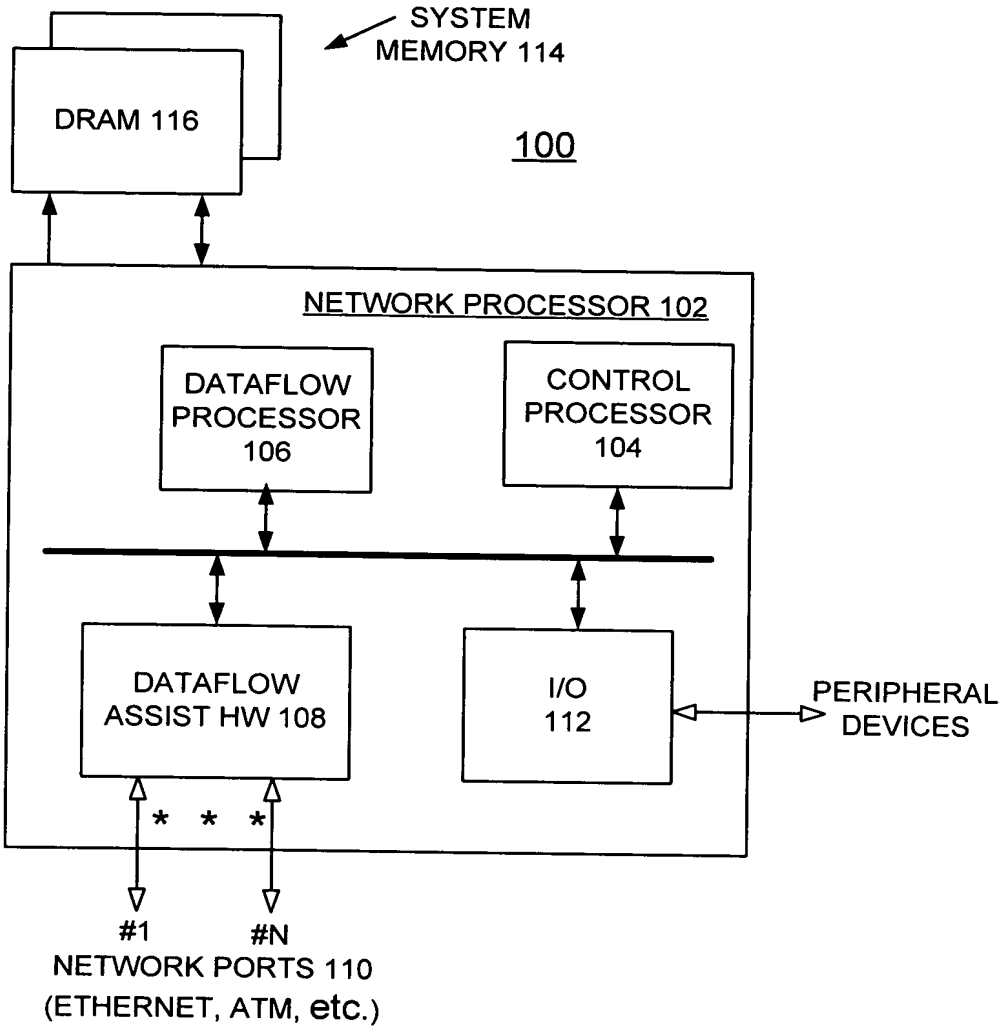
SYSTEM
MEMORY 114
DRAM 116
100
NETWORK PROCESSOR 102
DATAFLOW
PROCESSOR
106
CONTROL
PROCESSOR
104
DATAFLOW
ASSIST HW 108
I/O
112
PERIPHERAL
DEVICES
* * *
#1
#N
NETWORK PORTS 110
(ETHERNET, ATM, etc.)

FIG. 1

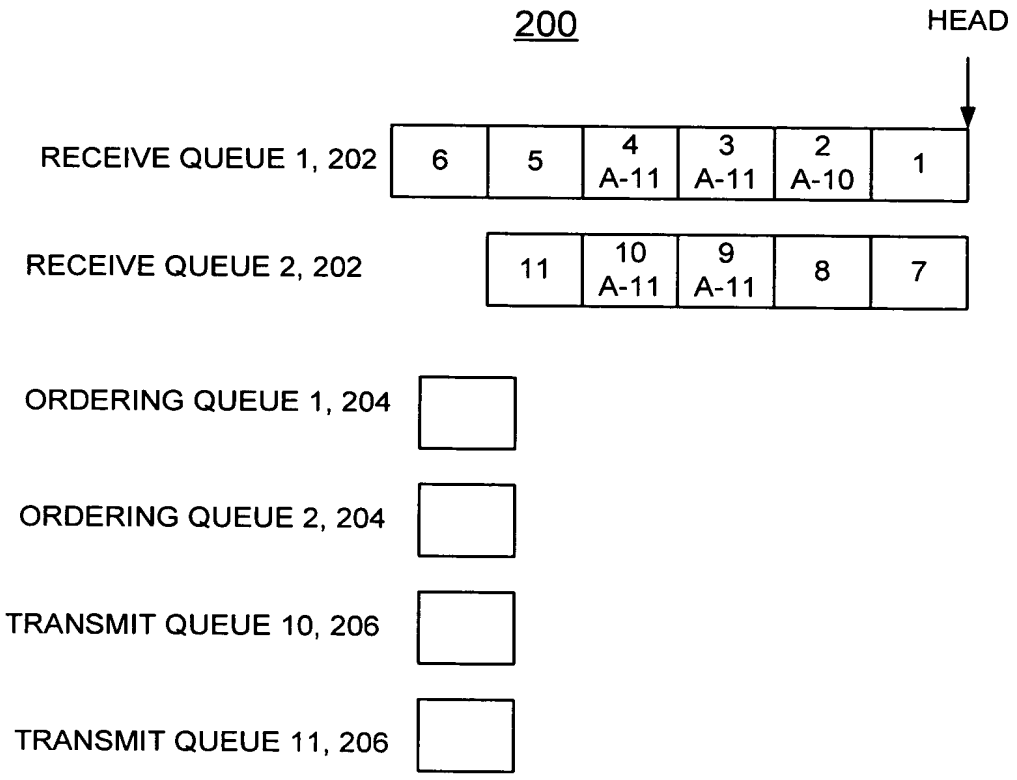
200
HEAD
RECEIVE QUEUE 1, 202
6
5
4
A-11
3
A-11
2
A-10
1
RECEIVE QUEUE 2, 202
11
10
A-11
9
A-11
8
7
ORDERING QUEUE 1, 204
ORDERING QUEUE 2, 204
TRANSMIT QUEUE 10, 206
TRANSMIT QUEUE 11, 206

FIG. 2

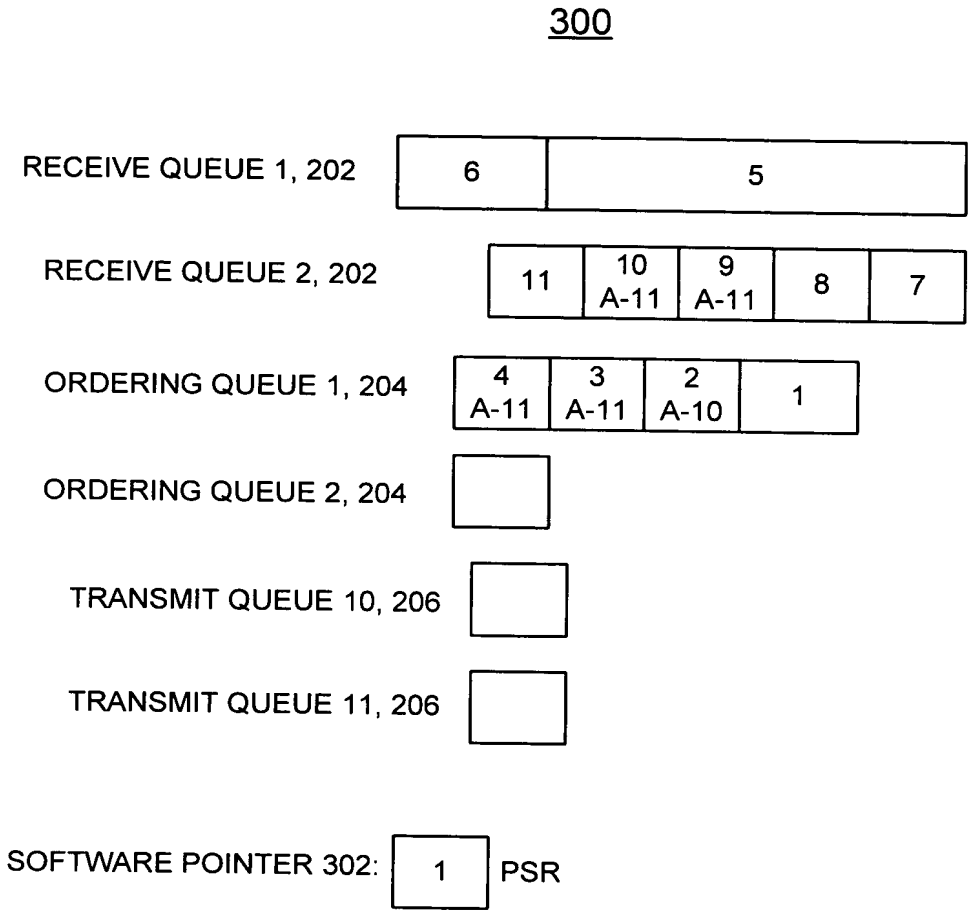
300
RECEIVE QUEUE 1, 202
6
5
RECEIVE QUEUE 2, 202
11
10 A-11
9 A-11
8
7
ORDERING QUEUE 1, 204
4 A-11
3 A-11
2 A-10
1
ORDERING QUEUE 2, 204
TRANSMIT QUEUE 10, 206
TRANSMIT QUEUE 11, 206
SOFTWARE POINTER 302:
1
PSR

FIG. 3

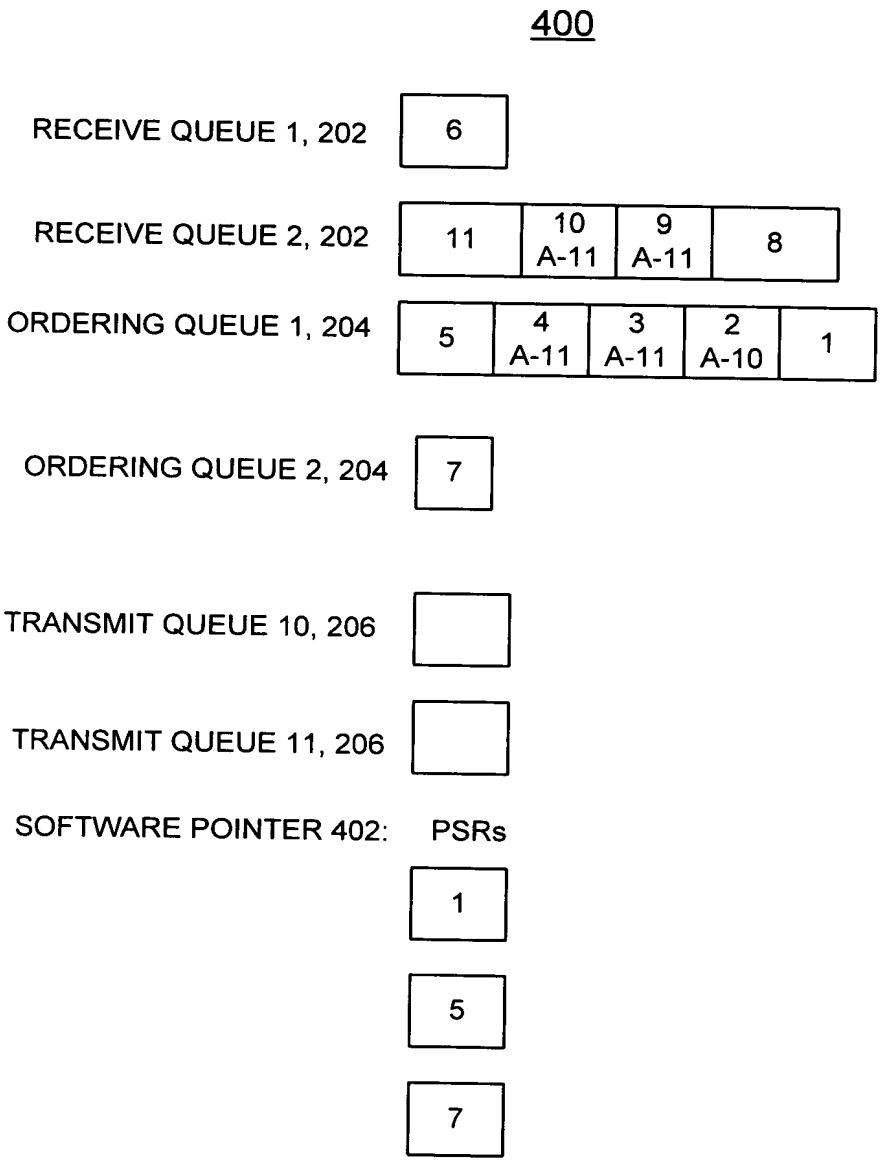
400
RECEIVE QUEUE 1, 202
6
RECEIVE QUEUE 2, 202
11
10
A-11
9
A-11
8
ORDERING QUEUE 1, 204
5
4
A-11
3
A-11
2
A-10
1
ORDERING QUEUE 2, 204
7
TRANSMIT QUEUE 10, 206
TRANSMIT QUEUE 11, 206
SOFTWARE POINTER 402:
PSRs
1
5
7

FIG. 4

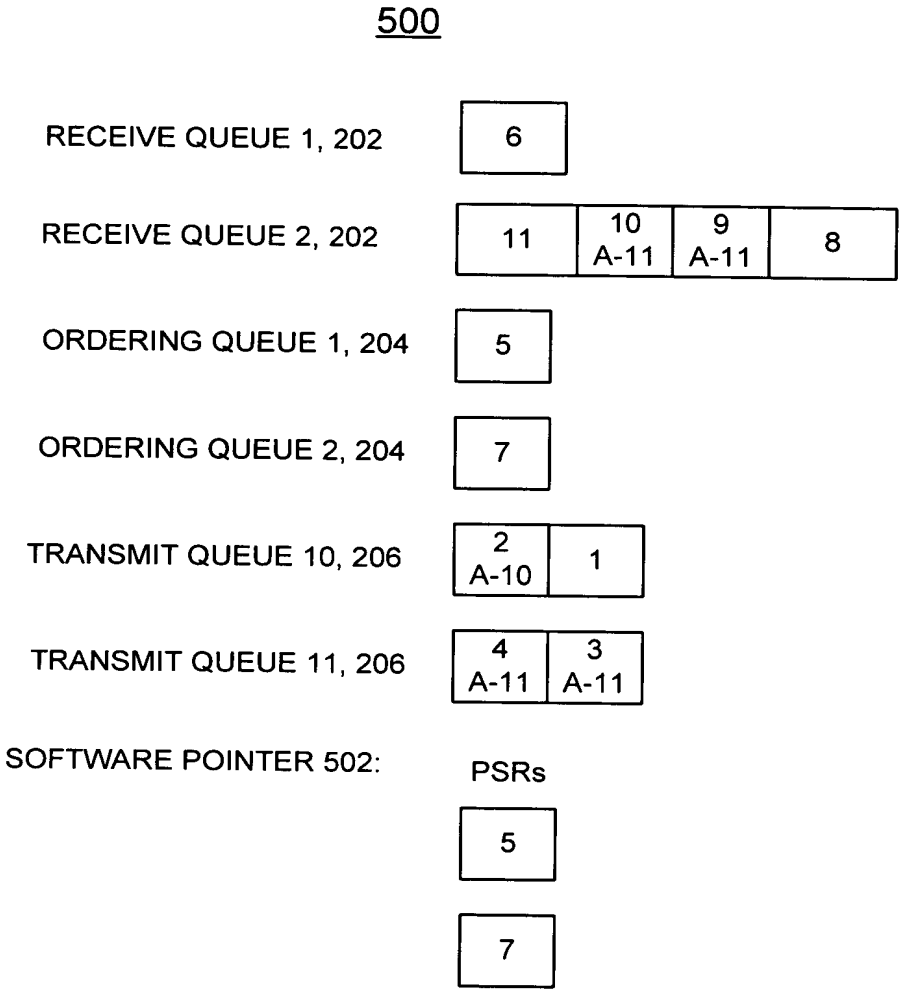
500
RECEIVE QUEUE 1, 202
6
RECEIVE QUEUE 2, 202
11
10
A-11
9
A-11
8
ORDERING QUEUE 1, 204
5
ORDERING QUEUE 2, 204
7
TRANSMIT QUEUE 10, 206
2
A-10
1
TRANSMIT QUEUE 11, 206
4
A-11
3
A-11
SOFTWARE POINTER 502:
PSRs
5
7

FIG. 5
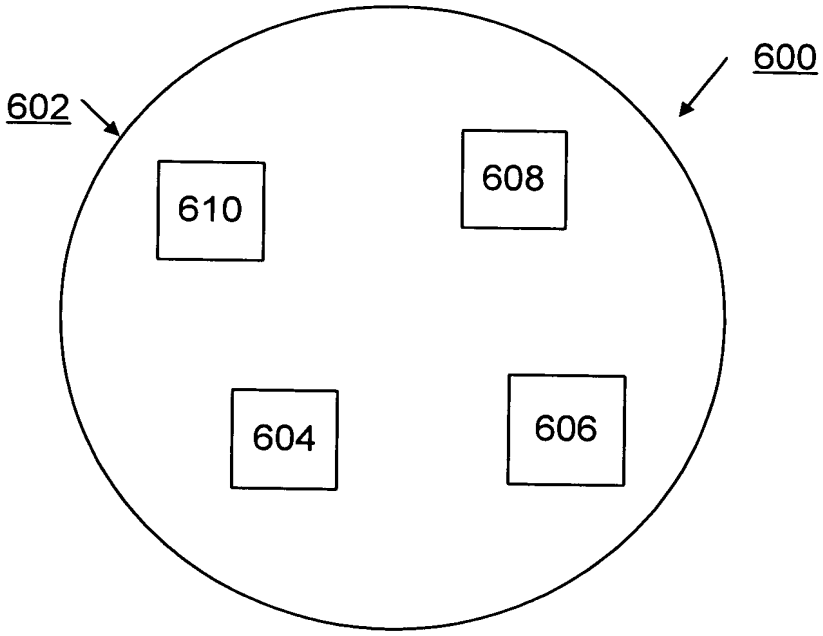
FIG. 6